MORALE BOOSTER 6

for

United For Our Expanded Space Programs

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I. Progress Is Our Most Important Product

As each of our projects develops, the strength of subsequent developments is correspondingly increased. The obvious secret to maximizing minimal resources is accretion and accumulation of events' effects. The power of our position will be made manifest through the methodical presentation of our views, as well as by the judicious application of pressure on the Space Machine itself. (It goes without saying that this pressure is directed in an effort to realize increases in the Machine's activities as opposed to the more typical decreases advocated in these situations.) With the completion of the Second Petition to the People's Representatives, another great advance in the space publicity campaign has been made. Our first work is to concentrate our efforts on explicating, for the space policy makers, the arguments supporting an expanded national commitment towards the use of the space environment. We do this through our Petitions.

In the First Petition, a general outline of the arguments for space was presented. There are so many reasons to support space activities, as well as so many variations in the manner in which they can be approached and presented, that it is not possible to do more than summarize them in the limited space provided by a single Petition. Thus, the necessity for numerous Petitions to the People's Representatives becomes obvious. The Second Petition, just finished and distributed to the entire 94th Congress, began the particularistic explanation of the economic rationales of an expanded space program, an explanation, it might be noted, which is quite detailed and lengthy. When the First Petition was written, it was thought that three Petitions might be sufficient for the basic presentation of UFOESP's position. After the Second Petition's completion, it became apparent that at least four would be needed and it is not unlikely that this number will be insufficient. It is important that we do not concentrate our arguments along too narrow a dimension. The full impact of the rationales for space is as much dependent upon the breadth of their concerns as the depth of them. Consequently, the focus of the Third Petition, which will be completed by the middle of September according to the most recent calendar of events, will not be on the economic aspects of an expanded space commitment but on the implications for international relations. As the United States and the Soviet Union, the two primary space powers, will have conducted a joint Earth orbital mission a little prior to the Third Petition's finalization, it is hoped that the impact of the arguments put forward in it will be increased. It is also to be hoped that the increasing deterioration in the world's order will also emphasize the pacifying possibilities of space exploration and exploitation; but the world's leaders may be so preoccupied with the burgeoning crises that they may be unable to make such a connection. It cannot be denied that it is less obvious how space can prevent war than how it may prevent depression; consequently, the focus will return to the economic question with the Fourth Petition. In this context it should be noted that the public is more willing to accept war as part of the nature of things than they are to assign that same character to economic crises.

Further Petitions to the People's Representatives will undoubtedly be necessary but what specific form and focus they will take is unclear now. Since the reasoning for supporting greater space programs is so intricate and extensive, it is best to develop it in sequential sections, leaving the future portions to be developed as the past and present ones are concluded. Until the Fall Media Campaign begins, the Petitions will be the major effort of UFOESP to change the space-policy makers' minds. They will not suffice in themselves to bring these changes into being but they will be the basis for our future efforts. Therefore, it is important that they not be weakened by too rigid planning of their contents into the future. If the Petitions are related to real events, the significance of their contents will be emphasized by the contexts in which they are first read. In a certain sense, it will be slow work; but, as the impact is cumulative, the work becomes easier with each project's completion. The First Petition and the Second have now been interposed in the interstices of the power network of Washington, D.C. We cannot be certain that they have stirred great commotion; we can be certain that they have been noticed.

II. Voices From The Outside World

"Chinese astronomers claimed to have discovered two minor planets between Mars and

Pluto. They told a British press delegation visiting the Nanking Observatory that the tiny planets, spotted last January, were rarely visible because of their position. The planets have been named Purple Mountain 1 and 2." The Los Angeles Times, Part I, Page 2, May 7, 1975, emphasis in original.

"Canada has all but erased the word 'remote' from its telecommunications vocabulary. In less than three years the Anik satellite system has drawn closer the frontiers of the Northwest Territories and the Arctic Circle. Today inhabitants of those far-off regions can enjoy the same benefits of direct telephone, television and radio service as their distant neighbors in the south. Telesat Canada, owner and operator of the world's first domestic synchronous satellite system, launched its third spacecraft in the Anik series May 7 from Cape Canaveral Fla. Anik III was needed to keep up with the rapid expansion of telecommunications to Canada's far north provinces. Designed and built by Hughes Aircraft Co. of California, Anik III joined two sister satellites launched into earth orbit in 1972 and 1973..... The Canadian system has served as a benchmark for nations planning similar communications networks with synchornous orbit satellites. These include Iran, Brazil, Australia, Norway and the Arab states. In each of these nations a satellite system would relay communications across vast distances of water, mountains, jungle or deserts, linking a country from border to border. In Canada, a chain of more than 50 earth stations, ranging in size from 10-foot portable units for remote areas to 42-foot complexes for large cities, has demonstrated the economy and efficiency of satellite communications compared with ground microwave systems. Communications experts say the unique value of Anik and similar domestic systems is their ability to provide every type of service--voice, picture, recording, computer data or combinations of these--to every corner of the nation. For instance, Anik earth stations in eastern Canada can send signals to the satellite for a relay to receiving stations all across the country's vast territory. Missing are the costly land cables and microwave towers. Telesat officials say a total of 70 earth stations will be operating in the next few months, to keep pace with the growing demand for communications in Canada's north country. Most of the need was spurred by increased oil exploration and development, Telesat says. Development of new petroleum basins hinges largely on direct communications to oil sites and camps. Vital to these operations is a reliable telephone contact from field offices to oil company headquarters. Moreover, occasional phone calls by workers to their families thousands of miles away often are morale builders. One of the northernmost mobile Anik units is the Rea Point terminal on Melville Island, virtually at the top of the world yet linked via satellite with oil company headquarters in distant Calgary. Typical of the new applications for satellite service is Canada's proposed Mackenzie Valley pipeline. It would stretch from the arctic through the Mackenzie Valley into southwestern Canada. Telesat says it has been asked by Canadian Arctic Gas Study, Ltd., to submit a proposal to provide telecommunications . . . along the 2,500-mile pipeline linking 50 or more pumping stations and control centers from Prudhoe Bay in Alaska to southern Canada. Telesat officials point out similar communications problems exist among the oil-producing nations of the Middle East, especially in Iran, Saudi Arabia and the Arab states. With the launch of Anik III, Telesat soon will announce its intention to buy additional satellites for continued expansion of the system. Hughes is building a similar network for . . . Indonesia. It envisions two satellites and nine earth stations by 1976 to link 120 million Indonesians on a chain of islands stretching 5,000 miles from Sumatra to West Irian by telephone, telegraph, television and teletype." The San Diego Union, Page A-16, May 18, 1975 by Frank Macomber (emphasis added).

"The Soviet Union launched a two-man Soyuz spacecraft Saturday with hopes of getting a second cosmonaut crew aboard its Salyut 4 space station. Television viewers saw a taped broadcast of what appeared to be a perfect launching and heard that one of the spacemen was the first journalist in space. Air Force Lt. Col. Pyotr Klimuk, 33, and civilian engineer Vitaly Sevastyanov, 40, both space veterans, were feeling well and the Soyuz 18 systems were 'functioning normally,' the official press agency Tass said about an hour after the launching. Sevastyanov works also as a commentator on a popular science program on Soviet television. He flew one other space mission in 1970, before he

became a television commentator. Klimuk is considered 'an experienced pilot,' Tass said, with command experience on Soyuz 13 in late 1973. The news agency said Soyuz 18 had been launched at 5:58 p.m. Moscow time . . . from the Baikonur space center 1,400 miles southeast of Moscow. For the Russians, the announcement was made unusually soon after the launching, suggesting that space officials considered the flight to be headed for success. The last manned space shot had to be aborted shortly after its April 5 launching because of what Soviet officials said was a rocket failure. The two cosmonauts and their Soyuz craft had to make an emergency landing. If Saturday's mission succeeds it could erase some of the embarassment of the failed mission and restore confidence in the Soviet space program less than two months before a scheduled linkup in space between Soviet and American spacecraft. . . . Manned laboratory missions have been given priority in the Soviet space program but have been plagued by mishaps. . . . The Russians have said that they are prepared for the Soyuz-Apollo flight July 15 and a top Soviet official said Saturday's mission 'in no way' was meant as a dress rehearsal for the joint venture. . . . Soyuz 17, launched Jan. 11, successfully linked up with Salyut 4, and two cosmonauts spent nearly a month aboard the station, concluding experiments, for a Soviet space endurance record. The U.S. endurance record is 84 days." The Los Angeles Times, Part I, Page 6, May 25, 1975 from AP (emphasis added).

"A communications satellite is being used this spring in an innovative program by the Federation of Rocky Mountain States to provide medical training refresher courses. About 1,000 emergency medical technicians will receive refresher training in the courses beamed to Wyoming, Colorado, Idaho, Montana, Nevada, New Mexico, and Utah." The Los Angeles Times, Part I, Page 9, June 15, 1975 from UPI.

"The two Soviet cosmonauts chosen for the space linkup with U.S. astronauts next month have completed final ground training in special simulators, the official press agency Tass reported Thursday." The Los Angeles Times, Part I, Page 24, June 20, 1975 from Reuters.

"Three stars, all about 64 trillion miles from earth, are being scanned in a United States satellite program on the off chance that a distant civilization may be beaming ultraviolet laser signals to earth. The space agency's Orbiting Astronomical Observatory, Copernicus, observed the first star, epsilon Eridani, for 14 revolutions last November and the data is now being analyzed for possible coherent signals from any planet that may be circling the star. Plans are under way to scan tau Ceti and epsilon Indi this summer and fall in earth's first intergalactic laser communication experiment led by Herbert F. Wischnia, Worcester, Mass., consulting electro-optical engineer. Wischnia is a guest investigator on the Copernicus program in which scientists other than the original investigators have been invited to propose experiments making use of the satellite's instrumentation. The search for intelligent signals involves the use of the Princeton University telescope aboard the spacecraft to scan the ultraviolet part of the optical spectrum of the target stars for spectrometer readings that could indicate laser beams aimed at earth. Wischnia notes that several American and Russian astronomy teams have searched candidate stars for radio signals in the recent past but were not successful in proving that earth is being irradiated by signals from intelligent beings on earth-like planets circling other suns. The detection of radio signals poses more technical difficulties because scientists must decide not only where to look, but at what frequency to listen. While laser observations can be made only from space because ultraviolet radiation cannot reach through earth's atmosphere, such an electromagnetic source offers a powerful and efficient means for interplanetary communication, Wischnia said. Furthermore, he pointed out, stars with temperatures near that of earth's sun radiate little energy in the ultraviolet, and telescope receivers thus are not blinded by natural stellar radiation. There is no assurance, however, that the target stars are orbited by planets, one or more of which might conceivably be inhabited by an intelligent civilization attempting to contact earth. The brightness difference between a star and a planet and the close separation of images makes the detection of distant planets virtually impossible. Wischnia declined to speculate on the chance of detecting extraterrestrial laser signals on the first attempt, noting that studies in the current program represent but a small percentage of the

Copernicus observation time." The Los Angeles Times, Part II, Page 8, May 23, 1975 by Marvin Miles.

"The Soviet moon exploration spacecraft Luna 22, launched a year ago last Thursday, has completed its original flight program and embarked on additional research, the official Tass press agency reported Monday." The Los Angeles Times, Part I, Page 6, June 3, 1975, from Reuters.

"Two Soviet cosmonauts started growing onions and peas 210 miles above earth Friday in their fifth working day aboard the Salyut 4 space station. The official press agency Tass said the flight commander, Lt. Col. Pyotr Klimuk, 33, and civilian engineer Vitaly Sevastyanov, 40, were in good health and the space laboratory was functioning normally." The Los Angeles Times, Part I, Page 19, May 31, 1975 from UPI.

"While the world watches the preparations for the spectacular Soviet-American manned spaceflight scheduled for July, space technicians in both countries are also preparing rockets for different space targets. New missions to Venus and Mars are ready for launching. They promise to deliver more exciting scientific results than those of the Apollo-Soyuz Test Project. . . . Earth satellites or moon shots can be launched on nearly any day of the year, depending on specific mission requirements. Other planets, however, are not nearly as accessible. Launch opportunities depend on the relative positions of the planets. They appear for only a few weeks and then are gone for years. In mid-1975, launch 'windows' for both Venus and Mars will again be open. Early in June, the Soviet Union is expected to launch two or three 5-ton spacecraft to orbit Venus, while in mid-August the United States will try to send a pair of 4-ton 'Viking' probes to Mars. Both ambitious missions could yield revolutionary new information about earth's neighbor planets.. . .The intervals between windows to other planets depends on the length of the years of both Earth and the targeted planet. For Venus, windows occur about every 18 months, while two and a half years elapse between Mars flight opportunities. For fast-moving Mercury, direct flight windows open every four months, but the only Mercury probe so far was sent on its triple-flyby visit via Venus, so a Venus launch window was used. Slow-moving Jupiter and the other outer planets offer launch windows every 12 to 13 months, but high launch velocities and long flight times have made such flights rare. ... .Since Mars is out of range of Soviet space probes this year, the Soviet Union will probably turn its attention back to Venus, when the window for that planet opens in the second week of June. This year it's the American turn at Mars. Two Viking lander probes will search for living organisms on the surface of the planet, while two orbiter vehicles similar to the . . . 1971 Mariner 9 spacecraft will examine Mars from space. American Mars probes in 1965 and 1969 found what looked like a 'moon-like' planet of uninteresting craters and plains. Mariner 9 changed all that. An active, unique world with evidence of liquid water was revealed, and the hope for some kind of life on Mars revived. Most investigators expect that life, if it exists at all, will be in the form of possibly dormant protozoa or microbes in the soil. Other specialists like Arthur Clarke and Carl Sagan have gone out on a long limb and cautioned fellow scientists not to overlook the possibility of large, mobile life forms as well. Such far out speculation is not unwarranted with a planet as full of surprises as Mars seems to be, but the main research program is devoted to the microorganism search. Whatever the form of the life, the discovery of living matter on another world would have far-reaching consequences for understanding the universe and the earth's place in it. . . .Further, with the analysis of other life forms, biochemists can understand terrestrial life better, both in its normal and pathogenic conditions. . . .After this year's shots, there will be a two-year wait before the next interplanetary probes are launched. In 1977, the United States will send two Mariner probes toward Jupiter and Saturn. Two Pioneer probes will orbit and land on Venus in 1978, and another Mariner may head for Jupiter and Uranus in 1979. A third Viking could also reach Mars that year. The space age is not even two decades old, but the exploration of the solar system is already advanced. Planet by planet, man-made robots range out from earth to distant worlds. Exciting new chapters in this inter-planetary saga will be written during the next few months." The Los Angeles Times, Part VI, Page 3, June 1, 1975 by James E. Oberg.

III. Condiments

United For Our Expanded Space Programs sounds many themes in its space publicity campaign. Space is the place because that's all there is; we cannot survive on the planet, we can only survive in the solar system; there are millions who would benefit from an expanded space program; the public is ripe for space; space permeates the consiousness of the American people. We repeat these ideas continually because we find new evidence for them each day or other suitable time interval. It is enlightening to observe intently advertisements in various forums for this purpose. While waiting at the counter of a paint store to purchase masking tape, the Treasurer and the President of this organization noticed a small flyer for a glue with 'space age bonding' capabilities. The Motorola Corporation markets a color television line called 'Quasar'. A new time piece has become available for purchase which is reputed to be the ultimate in watches; it is called 'Pulsar'. Astronauts have been known to endorse petroleum products. Naturally telecommunications companies frequently speak directly of their space aspects, in providing the swiftest product, in their advertisements. Although such references to space seem trivial if not distorted, they also represent the profound acceptance of cosmic endeavors and phenomena amongst the masses. It remains for us to utilize this state for our ends. We begin with noting in the future other such examples of the use of space concepts so that we may demonstrate in mundane detail the immediate reality of space in the nation's life.

United For Our Expanded Space Programs is an activist organization. This is not only noted in the membership classifications but also in the attitude the national leadership adopts towards the separate members and the local organizations. The Board of Governors feels that each individual member and each distinct Chamber possess the greatest potential for making the space publicity campaign a success. Although technically it is only necessary to change a few hundred minds to achieve our goals, those critical minds are only responsive to disciplined, determined, and forceful action. This can only be accomplished through the use of <u>all</u> our resources; and this can best be achieved by having as many generators of action as we can have. Let us speculate on the avenues open to us in this modern age; let us communicate as forcefully as possible amongst ourselves. If any member has an exposition of the value of more intense space activity; or an idea as to how the space publicity campaign may be furthered; or a product which will generate financial or other support for UFOESP; let that member communicate with the Board of Governors so that the matter may be presented and pursued in <u>Morale Booster</u>. In the future, membership lists for the Chambers will be distributed to the members of the respective Chambers; it is our hope that the active members will establish relations with one another and that the passive ones will be moved to be less detached with regards to our efforts. Unity is the key to moving the masses; we must unite! for our expanded space programs!

IV. Stimulus/Response: July 19, 1975

"This is in response to your interesting letter describing the United For Our Expanded Space Programs organization's goal of exploring and eventually colonizing the solar system. We, of course, are in favor of an expanded program of space exploration and feel that, when national priorities permit, our funding will be increased to permit a broader scope of space activity. As to colonization, that would depend on the environments we may find on other bodies in the universe,costs, and a number of other factors, some of which would involve national policy. In the key matter of costs, I am enclosing four publications: 'History of Manned Space Flight,' 'Space Science,' 'Space Shuttle,' and 'Apollo-Soyuz Fact Sheet.' All contain funding information on NASA's principal projects. As to analogous calculations for a manned Mars landing, a survey of all the outer planets, and establishing a scientific lunar colony, a careful feasibility study would have to be undertaken in each instance before we could reach cost estimates. In any event, we deeply appreciate UFOESP's interest in and support of the space program." O.B. Lloyd, Jr., Director of Public Services, NASA, 400 Maryland Avenue S.W., Washington, DC 20546 ... There exist many groups such as ours which seek to increase the Space Experience. When we speak of unity we speak not only of the unity of individuals but also of the unity of groups. We are not alone; we need not behave as if we represent

some minority easily overlooked or ridiculed. The Space Age, though extensive in terms of the lives of those on Earth today, has only shaped humanity's destiny for a small portion of human existence on the planet. Therefore, it is easy for those not tuned to the multitude of projects directed towards space to give space adventures the quality of fantasy or fiction. To counteract this tendency, in others or ourselves (we are not immune to the conditioning of our cultures), we must speak boldly the facts....and seek contact with others of like mind or understanding. Unity. Is the key. So we thank Mr. Lloyd for his support and write to him again to develop another resource for our space publicity campaign. All events and phenomena must be viewed as resources until proven or demonstrated otherwise. It's simple ecology!

"Allow me to congratulate you on your insight, the obvious strength of your conviction, and for your courage in taking action with what I assume is null financial support. There is poetry in your doctrine, for which I forgive you, and logic, for which I applaud. Space is indeed the place. Now we'll come to the point . . ., I'm a writer and photographer with a few credits here and there, and I'm an engineering student at UCSD. I'm a lover of adventure and the conquest of darkness. Someday, next year, next month, tomorrow morning, I want to ignite a flare in the political sky of America and call it the Expansionist Party. I'm incandescent with enthusiasm and with what I hope you'll think are viable ideas. Most of all, I want to talk with you, with your board, with any and all of your members. We are ready, America is ready, technology is ready. We have liftoff!" Laurence B. Winn, 3827-C Miramar St., La Jolla, CA 92037 ... One point made in the Second Petition is that over 40% of all high school graduates attend another institution of higher learning for at least two years. This educated mass represents another fertile field for our organizational efforts. There are hundreds of astronomers, astrophysicists, chemists, geologists, atmospheric scientists (to name only a few of the educated mass' members) who would be likely candidates for educational efforts directed at recruitment of such talent. These people are located in all regions of the country, most of the nation's social strata, and thus present a diversity in spacetime especially useful to us. It again is a question of making contact and seeking to combine as many resources as possible and then to direct them concertedly towards expansion in our space programs. Mr. Winn did speak with the Board of Governors and, though, in person, he determined a more detached approach than his letter indicated he might, the meeting was successful in that he not only became aware of our manipulations of the American psyche but we interacted with his. Though unity obviously is better than disunity, one cannot deny that even isolated acts have their effects. Therefore, we encouraged Mr. Winn in his fruitless quest to publish a quality periodical alone knowing that every time he spoke the idea, space flashed once again in another consciousness. What we must learn to accept is that our defeats represent advances, even if small ones. All our projects bring us into contact with others and these contacts always involve some presentation of space as a positive reality. The process is cumulative and this is why we are able to advance on all fronts no matter the obstacles before us. Mr. Winn, we'll meet again!

"We will schedule you for a meeting room between the hours of 10 a.m. and 1 p.m. on Sunday. There shouldn't be any problem if you want to use the room for a longer time period. Sorry about the delay in answering your letter, but we seem to be in the middle of a deluge of correspondence." Milton F. Stevens, Westercon 28, P.O. Box 24560, Los Angeles, CA 90024 ... The convention was a roaring success but discussion of it will be deferred until the next issue. The lesson to be learned again is that vast multitudes exist who are receptive to some portion or aspect of our messages and projects. The Western World is enormously wealthy and its citizenry has much leisure, a good part of which is devoted to the pursuit of personal interests in social groups. If we transmit our propaganda to these 'societies' in a direct manner, we will increase markedly the rapidity with which our propaganda reaches a larger and larger audience. It goes without saying that much effort is necessary to conduct such proselytizing effectively; we must choose our forums carefully and methodically; but the rewards can be tremendous. As UFOESP's program eventuates, we will find ourselves directing increasing energies to these intrinsically interested social groups. At that time we will truly engage the Space Machine and test our theories, progress, and projects against its adversaries. Our

success will in great measure be defined by the skills we learn and the understandings we gain in the first ventures into public life. Advance on all fronts. There is nothing like the future!

V. Our Money, Their Space Program: Part Two

"The Federal Energy Research and Development Administration was voted $5.8 billion by the House for research projects over the next 15 months. At the same time the House refused to halt construction funds for the controversial Clinch River fast breeder nuclear reactor, scheduled to be built near Oak Ridge, Tenn. A group of congressmen headed by Rep. Lawrence Coughlin . . . tried but failed to shave $72.1 million from the reactor project, claiming present safety devices could not protect the local population from explosions." The Los Angeles Times, Part I, Page 2, June 22, 1975.

As said in "Stimulus/Response" for this issue, we must speak boldly of the necessity for space exploration and the consequent use of the space environment for human purposes. This approach is necessitated not only by the existence of many groups within modern society which would find expanded space works to be beneficial; it is also compelled by the reality, brought forth in last month's installment of this piece, that space expenditures do not represent nearly the enormous sums as their critics would have the populace believe. It is imperative that our propaganda not apologize for space expenditures nor seek to justify such monies on nebulous grounds such as adventure and scientific discovery. This is not to say that such arguments are not meaningful or that we will not use them. It is only to state that the primary focus should be on the economic question. If it can be clearly demonstrated from an accounting perspective that monies spent on space projects are not wasteful, frivolous, or remote from present national concerns, then less prosaic views will simply emphasize an already powerful thesis. Before long, we will gleefully tell the populace the costs of this nation's space programs.

In order to generate the proper attitude for the study of the economics of space, it is helpful to view particular space expenditures in relation to other expenses, from either the public or private sector of the economy. In both last month's issue and this, some examples of governmental costs have been given and they are revealing. One discovers that there are a multitude of Federal projects which involve sums comparable to the entire space appropriations as well as many others whose sums exceed NASA's budget. Other comparisons can be made. If one compares the cost (to the American taxpayer) of the Apollo-Soyuz Test Project (245 millions of dollars) to the population of the United States, one discovers that the cost per person is only slightly more than one dollar. It is quite clear from such a ratio that the space budget is not a crushing burden on the electorate. If this reasoning is pursued and space appropriations are compared to the sums spent by Americans on records or tobacco or alcohol or coffee or aspirin or cosmetics or carbonated beverages or on any number of other artifacts of leisure, one easily realizes that justification of the space program could be obtained from entertainment considerations alone.

The key concept in all these exercises is the wealth of the Industrialized World. The plight of humanity has been so wretched so long for so many people (and continues to be so in many areas today) that it is difficult to conceive enormous wealth even when it is staring one in the face. In the United States, this wealth is most obvious yet most people cannot see it for the distribution system makes for vast differences in individual holdings and most are blinded by history and personal tradition to recognizing these riches. One must also consider the tendency for wealth to be defined, in personal terms, as more while poverty is equated to less. The absolute character of possessions is seldom emphasized and their relative character is. Person A possesses 20 times as much as Person B. Even though the value of Person B's goods may be enormous, the tendency is not to put both in the same category but to distinguish between the two. When one considers the situation in which the number of individuals in Person B's position is quite large (perhaps half a nation's population) while the number of persons in A's situation is considerably less, one learns that the tendency of the people in B's situation is to regard themselves not as less rich than A but as poorer than A which can readily be generalized into meaning poor period. When one takes into consideration the fact that even the richest among us do not deal with sums totalling millions and billions,

it becomes apparent why economic attacks on the space program of America are so readily made even though the space program is cheap when all costs and rewards are evaluated.

Man does not live by bread alone and so opposition to space expenditures is not based on solely economic arguments. The economic approach (or attack) is taken because it seems the most vulnerable point at which to bring pressure to bear against the endeavor. The strongest argument, besides the question of relevancy, the opposition will muster will be the economic one. If that argument is shown to be irrelevant, falacious, and inadequate, the strength of the opposition as a whole will be gravely impaired and, perhaps, fatally affected. One must not deny the size of space expenses; one must take pride in them. It perhaps seems inappropriate to inject emotional perspectives into this rather nuts-and-bolts discussion but it is important to recall that it is the emotional perspectives which will provide the energy and stamina necessary to withstand the emotional aspects of the opposition's attacks. Remember, the economic question is usually tied to the relevancy one, even when the former is ostensibly all that is involved in the discussion or criticism. Pride will provide the catalyst to persevere and patiently, devastatingly expose the shallowness of the opposition's position.

To conclude for this month: the arguments for space are numbing in their number. We choose to focus on the economic question <u>not</u> because it is the most important or even strongest <u>for our position</u> but because it is seen by our opponents as the most powerful criticism <u>for their position</u>. It is far better to attack the adversary's strongest position than to defend our weakest. Naturally, when our major strength lies in the very region where the opposition is weakest, the efficacy of such an approach is doubly emphasized. It is time to talk money; it is time to compute and calculate and itemize all the expenses incurred in the space program and to display them prominently in all the forums we choose to address or attend. Let us not <u>defend</u> the costs of the space program but make them the cutting edge of our demands for a fuller commitment by America to space. One hundred billion dollars to send a man or woman to Mars? It's nothing! We spend that much on new weapons research <u>alone</u> in four years!

------ J. Graham Maughan